

REMARKS

Applicants respectfully request entry and consideration of the Amendment submitted herewith.

STATUS OF CLAIMS

Please cancel Claims 1-3, 6-14, 20, 21 and 25-27. Also, please add Claims 39-51. After entry of this amendment Claims 39-51 will be pending. Support for the new claims can be found throughout the specification and in the claims as originally filed. For example, at least at paragraphs [0021], [0024] to [0026], [0034], [0037] and original Claim 21. No new matter has been added.

35 U.S.C. §102 REJECTIONS

Claims 1-3, 6-14, 21 and 25-27 stand rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Kang *et al.* (U.S. Patent No. 6,265,061, hereinafter referred to as “Kang”). In light of the aforementioned cancellation of Claims 1-3, 6-14, 21 and 25-27 this rejection is believed to be obviated. Nevertheless, Applicants discuss Kang as it applies to the newly submitted claims.

Kang describes retroreflective articles comprising a substrate and a cured coating that is abrasion resistant thereon. However, the cured compositions described by Kang differ significantly from the presently claimed invention. Notably, Kang fails to disclose a composition having the specific components in the specific amounts presently claimed. Specifically, through this amendment, the presently claimed invention incorporates the subject matter of non-rejected Claim 20 “wherein the inorganic filler [silica nanoparticles] is present in an amount between about 30% and about 50%.” The Examiner admits that Kang fails to teach that the silica is present in an amount between about 30% and about 50%. Accordingly, Kang cannot anticipate the presently claimed invention.

It is well settled that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. *See* MPEP §2131. Applicants contend that the compositions of the presently claimed invention and the physical properties associated therewith are neither explicitly nor inherently described by Kang.

In light of the aforementioned amendment and remarks, Applicants respectfully request withdrawal of this rejection under 35 U.S.C. §102(b).

35 U.S.C. §103 REJECTIONS

Claim 20 stands rejected under 35 U.S.C. §103(a) as allegedly being obvious over Kang. As noted above, the Examiner admits that Kang fails to teach that the silica is present in an amount between about 30% and about 50%. It is alleged that a skilled artisan would be motivated to modify the % silica based on Kang. Applicants respectfully disagree and contend that one of skill in the art would not be motivated to modify the compositions of Kang to form a composition comprising the specific components in the specific amounts presently claimed. Applicants further contend that a skilled artisan would not have a reasonable expectation of success in modifying the compositions of Kang to achieve the degree of abrasion resistance required in the presently claimed invention using the steel wool abrasion test described therein.

Applicants point out the disparity in abrasion resistance amongst the compositions described by Kang. Specifically, Kang describes a Steel Wool abrasion test ("Test Procedure XIV," col. 27, lines 32-39) and that its inventive composition as well as the comparative compositions "Pass." However, Kang does not describe whether any of the coatings maintain about 95% of their post-cure gloss following this test as found in the presently claimed invention. Additionally, Kang discloses a Taber abrasion test and Falling Carbide abrasion test ("Test Procedure I," col. 24, line 59 to col. 25, line 2 and "Test Procedure XV," col. 27, lines 40-53, respectively) wherein the %

post-cure gloss following such tests is determined, however none of the compositions examined maintained about 95% or higher of their post-cure gloss in both these tests. As there is significant variation with regard to the % post-cure gloss maintained even amongst the compositions described by Kang in the abrasion tests studied therein, one of skill in the art would not be able to predict the abrasion resistance if the components and relative amounts of the Kang compositions were modified. For example, there is no way to predict the % post-cure gloss results as claimed following the Steel Wool abrasion test from the Kang disclosure. In fact, a variety of % post-cure gloss values might result. Likewise, due to the unpredictability of abrasion resistance for a particular composition, a skilled artisan would not be motivated nor guided to modify the compositions described by Kang to achieve those of the presently claimed invention which maintain about 95% or higher of their post-cure gloss. Thus, Kang cannot render the presently claimed invention obvious.

Claims 1-3, 6, 9-11, 13-14, 20 and 27 stand rejected under 35 U.S.C. §103(a) as allegedly being obvious over Perrine *et al.* (US 2003/0194549; hereinafter referred to as “Perrine”). Additionally, **Claims 12 and 21** stand rejected under 35 U.S.C. §103(a) as allegedly being obvious over Perrine in further view of Ha *et al.* (US 2002/0032251; hereinafter referred to as “Ha”).

As the presently claimed invention incorporates the subject-matter of Claim 21 into the independent claims wherein the composition comprises “trimethylolpropane triacrylate in an amount between about 5% and about 85% by weight of said composition,” the aforementioned rejections of Claims 1-3, 6, 9-11, 13-14, 20 and 27 as well as Claims 12 and 21 will be addressed together.

Perrine describes abrasion resistant coating compositions. Perrine fails to disclose a composition

having the specific components in the specific amounts presently claimed. In fact, the Examiner admits that Perrine does not disclose a specific embodiment containing about 30 to about 50 wt% of alumina/silica particles. It is alleged that one skilled in the art would be motivated to increase the amount of silica up to 35% as Perrine suggests that the amount of silica should be added to the composition in order to impart a desired level of abrasion resistance, with a general trend of a higher concentration of particles, the greater the abrasion resistance. However, the cured compositions described by Perrine differ significantly from the presently claimed invention. Moreover, as indicated in the discussion of Kang above, the degree of abrasion resistance as measured by the % post-cure gloss following abrasion is not predictable.

Additionally, the Examiner admits that Perrine does not disclose a specific embodiment having the abrasion resistance coating applied to a road reflector. It is alleged that one skilled in the art would have been motivated to do so as Perrine suggest that the abrasion resistance coating can be applied to a variety of substrates including wood, plastics, ceramic, metal and glass. However, as discussed above, the degree of abrasion resistance as measured by the different tests disclosed in Kang varies even among the same composition. Thus, one skilled in the art would not predict that based on the use of Perrine's compositions for the aforementioned materials, such a coating would be suitable for a road reflector. Rather, the use of a composition for coating a road reflector requires a level of abrasion resistance that meets Federal Specification FF-W-1825 as claimed in the present invention which is neither disclosed nor suggested by Perrine.

The Examiner's combination of Perrine with Ha fails to set out a *prima facie* case of obviousness. Not only does Ha fail to cure the deficiencies of Perrine, there is no logical reason why a skilled artisan would look to Ha. Moreover, Ha provides no guidance or direction which further leads to the claimed invention.

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Ha describes abrasion resistant compositions useful for digital versatile discs and other substrates. Even though Ha discloses the reactive diluents claimed among a list of several possible reactive diluents, Ha nonetheless fails to guide one to the reactive components and their amounts as claimed. Likewise, Ha fails to guide one skilled in the art to modify compositions disclosed therein or in Perrine such that the compositions achieve a level of abrasion resistance that meets Federal Specification FF-W-1825 as claimed in the present invention. Thus, it is respectfully submitted that the presently claimed invention is patentable over Perrine and Ha, each taken alone or in combination.

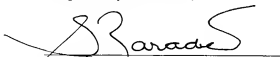
In view of the aforementioned amendments and remarks, Applicants respectfully request withdrawal of these rejections under 35 U.S.C. §103.

CONCLUSION

Applicants respectfully request entry of this after final amendment which is believed to progress this application in condition for allowance. Applicants believe Claims 39-51 are in condition for allowance and respectfully request the same.

If there are any questions or if additional information is required, the Examiner is respectfully requested to contact Applicants' attorney at the number listed below.

Respectfully submitted,


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